Merco Savory

Enodis

PARTS & SERVICE MANUAL

PD-4

"POP-DOWN" TOASTER

The PD-4 "Pop-Down" toaster is revolutionary in design concept. It's unique principle allows finished product to gently drop to the receiving pan. Operation is a simple push-button procedure with full control for the degree of toasting desired. The solid state computer circuitry ensures consistant results every time, no mater how frequently the toaster is used.

The information in this manual will contain part numbers and descriptions of replacement parts along with illustrations and guidelines for repairs.

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SEQUENCE OF OPERATIONS

Power is permanently supplied to the timer and the “push to toast” button. When depressing the “push to toast” button, power is supplied through the timer(control board) to a normally open relay, applying power to the heater cards along wiht the heat indicator light.

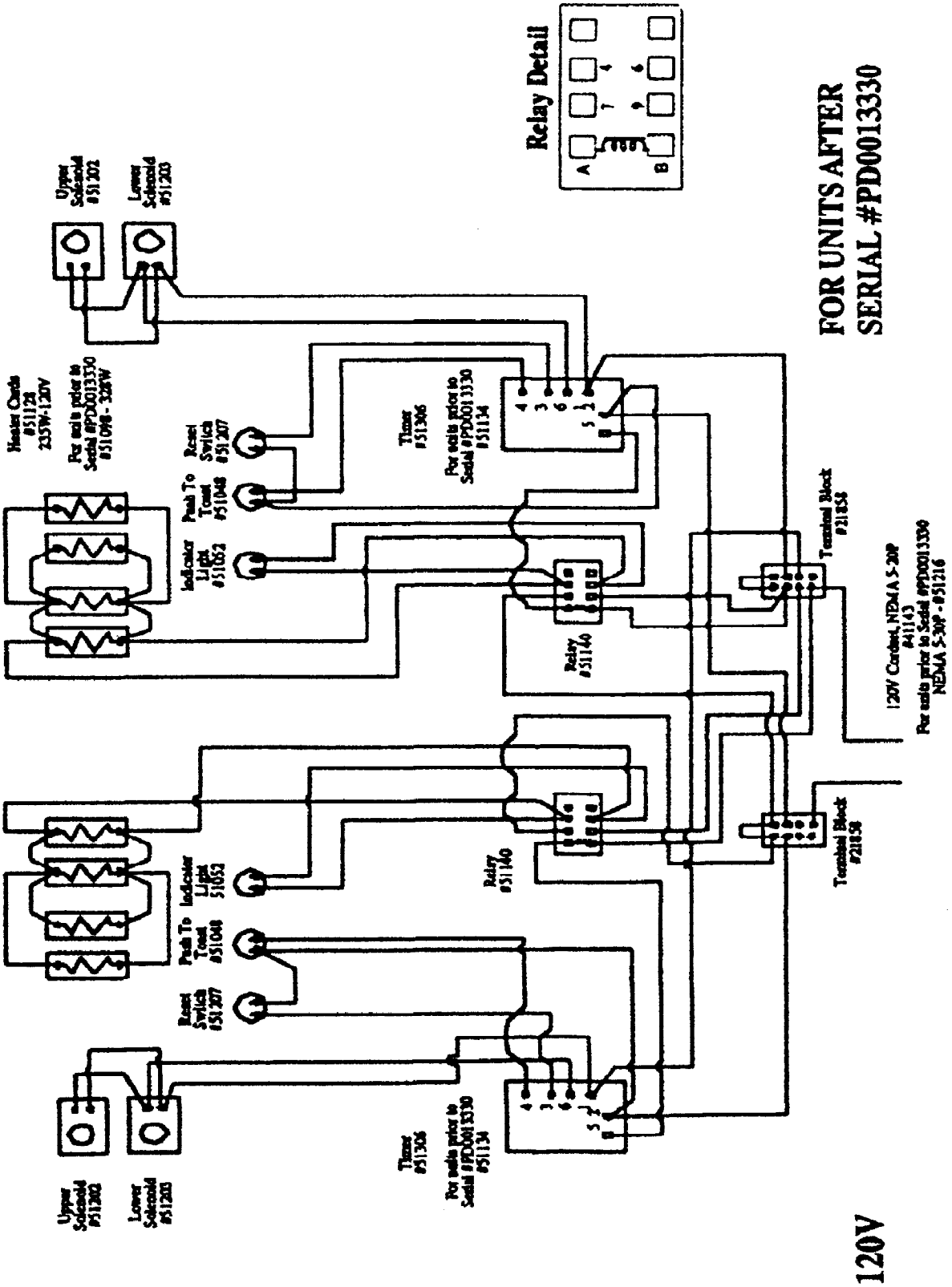
The heater cards operate at a constaant voltage and wattage. The hold time of the toaster determines the lightness or darkness of the product and is adjusted by the light/dark control dial on the front of the toaster.

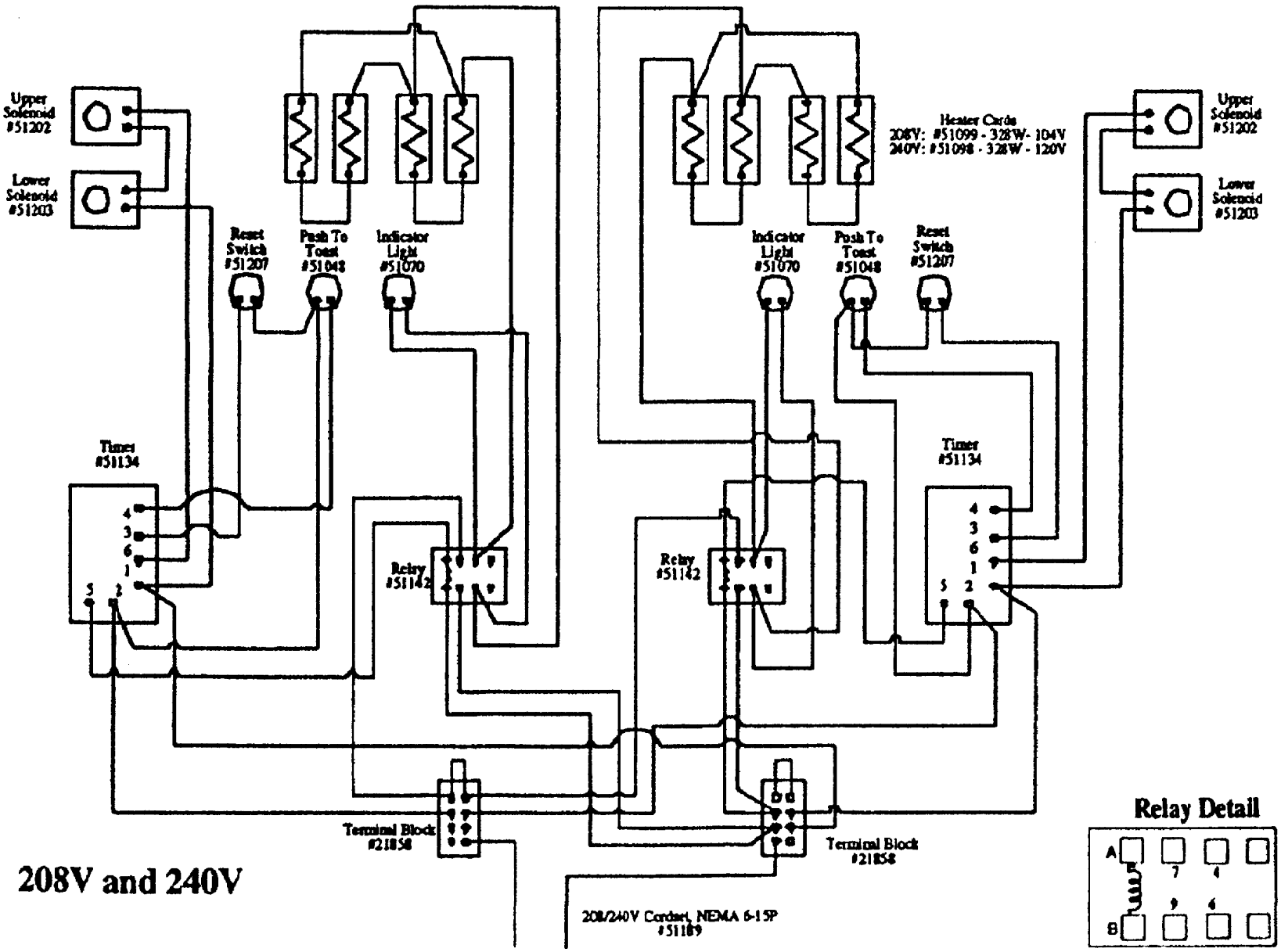
When the heating sequence is complete, the timers open the normally closed upper and lower solenoids, activating the linkages, opening the doors and allowing the product to drop down into the receiving tray.

NOTE:

At any time during the toasting cycle, the circuit may be interrupted by pressing the reset button. This will stop the voltage and open the release doors.

WIRING DIAGRAMS



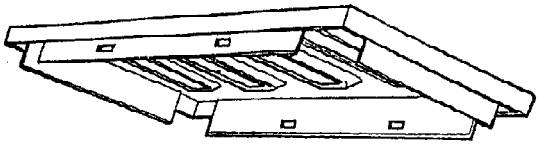

Upper Solenoid #51202
Lower Solenoid #51203
Reset Switch #51207
Push To Toast #51048
Indicator Light #51070
Heater Cards
208V: #51099 - 328W - 104V
240V: #51098 - 328W - 120V
Timer #51134
Relay #51142
Terminal Block #21858
208/240V Cordset, NEMA 6-15P #51189
208V and 240V
Relay Detail

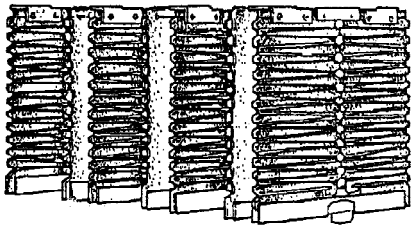
TROUBLESHOOTING GUIDE

CONDITION	PROCEDURE
Doors do not open / close or do not open/ close fully.	Check solenoids and timer. Check for loose or improper wiring. If all of these prove correct, Replace chassis assembly. (pre 1982 models only)
Doors open, but toasting light remains illuminated.	Check wiring and timer.
Doors held open by solenoids, and only close when power is disconnected.	Check reset button and timer.
Light/Dark controlprovides no change in toast color.	Check timer, heating elements and wiring.
Heating elements do not light during toasting.	Check heating elements, relay, timer, push-to-toast button. Check wiring.
Toasting light does not illuminate when push-to-toast button is depressed.	Check toasting light, relay, timer. Check wiring.
Push-to-toast button does not control the toasting function.	Check push-to-toast button, timer, relay, heating elements. Check wiring.
Bread does not toast.	Check plug/receptacle. Check all points listed above.
Heating elements glow immediately after toaster is plugged in.	Check timer and reset button.
Noisy operation.	Check for loose screws on solenoid mount and chimney. Chinmey hitting rear panel of toaster.
Flare-up of heating elements.	Possible insulator screw fragment contacting the heating element. Check insulator for cracks.
Heating elements are on and will not go off.	Check wiring, relay, timer and push-to-toast button.
Heating elements on, toasting light off.	Check wiring, relay, and toasting light.
Bread is not delivered into the receiving tray at the end of the toasting cycle.	Check solenoids, timer, push-to-toast button.Check wiring. Check that bread product is not too thick.
Doors flutter	Replace timer.

REMOVAL / INSTALLATION / AND ADJUSTMENT

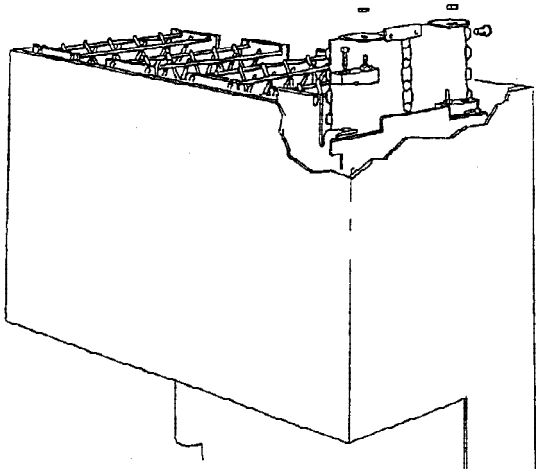
HEATER CARD





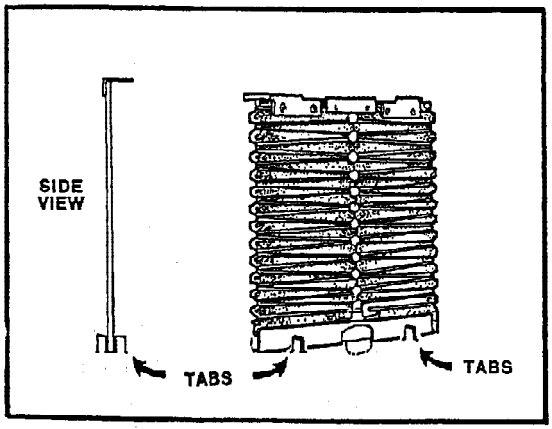
DISCONNECT TOASTER FROM POWER SOURCE.

1. Remove top 2 screws from back. Lift off top.



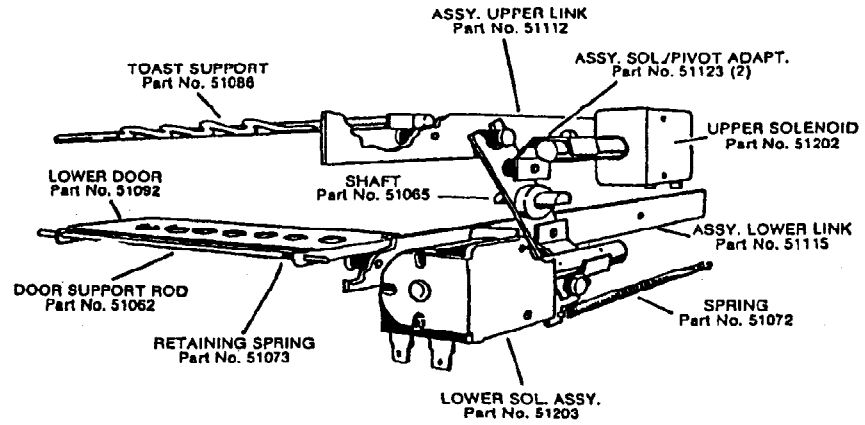
2. Remove nuts and wire terminals from card.

3. Lift out card.

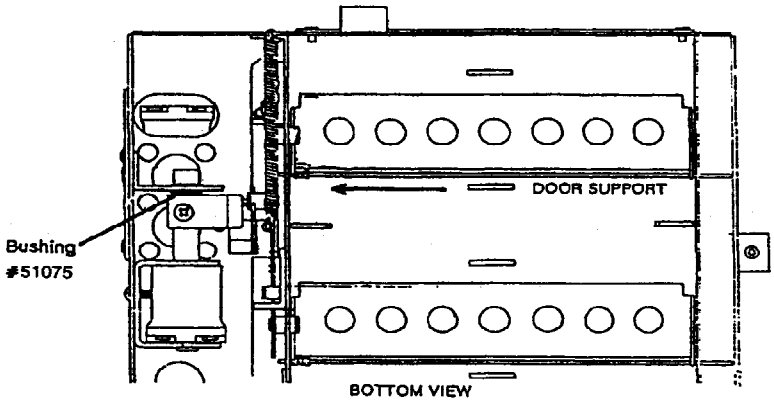


4. Install new card between tabs in chassis. Make sure tab on the bottom of card fits into hole in chassis.

5. Re-attach wires, nuts, and top.

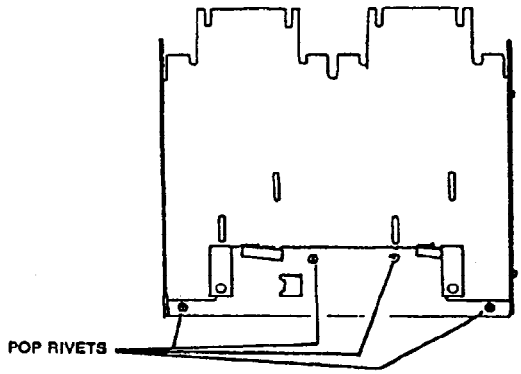


DOOR LINKAGE AND SOLENOIDS



To remove and replace lower doors it is not necessary to remove chassis assembly from toaster. Slide door suport in direction shown and remove door. To replace, slide door on support and position support in bearing hole. Push retainer spring tight against chassis.

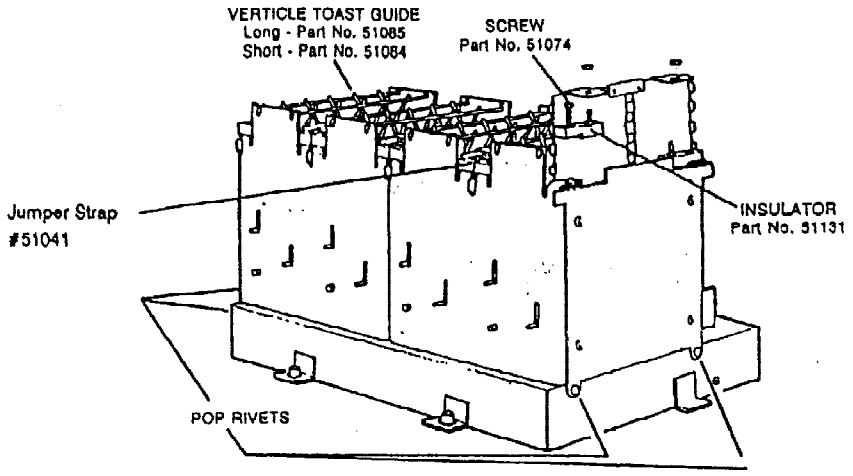
LOWER DOOR REPLACEMENT



Toast Support Removal

Separate upper and lower chassis sections. Slide upper linkage from bracket. Remove four pop rivets holding bracket to chassis. Remove toast support through slot. Reverse procedure for installation.

UPPER AND LOWER CHASSIS



Upper and Lower Chassis Sections

Remove chassis from toaster. To separate upper and lower sections of chassis, remove the four pop rivets on each end of chassis.

COMPONET TEST PROCEDURES

RELAY

Measure the resistance between terminals A & B.

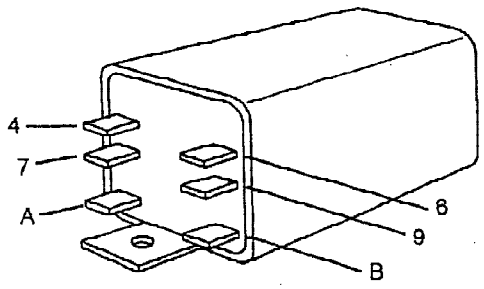
For 208/240V toasters, R = 9000 Ohms.

For 120V toaster, R = 2200 Ohms.

Measure voltage at output terminals of relay, #4 & #6, while depressing the toast button. Volts should match the line voltage to the toaster.

If no voltage is measured at output, measure input voltage at terminal #7 & #9.

If voltage is present at input but not at output, replace the relay.



HEATING ELEMENTS

We recommend a resistance check to ascertain heating element defect. Visually check heater card wires for breaks.

Remove wires on both sides of the heating elements for proper resistance check. Keeping jumper wires on terminals will not result in accurate reading.

RESISTANCE MEASURED (COLD)

120 Volt Heater cards - 36-38 Ohms.

208 Volt Heater cards (104V) - 30-32 Ohms.

TOASTING LIGHT

Measure voltage at realy terminals #4 & #6. Voltage should match line voltage to toaster.

If voltage is present, check wiring.
If wiring is correct, replace the light.

TOAST BUTTON & RESET BUTTON

Resistance check is required to ascertain if either button is defective.

Disconnect wires from one side of the switch. Resistance should measure less than 10 Ohms.

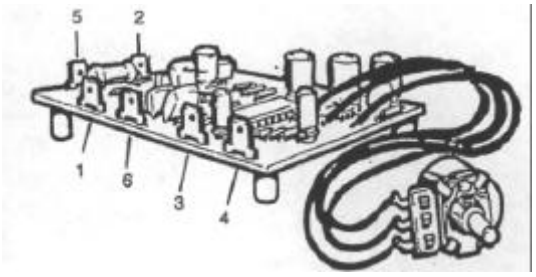
If no resistance is measured, replace the switch.

TIMER PERFORMANCE CHART

LINE VOLTAGE TO TOASTER	**TERMINALS #6 & #1 VOLTS MEASURED WHILE DEPRESSING RESET BUTTON**	**TERMINALS #5 & #1 VOLTS MEASURED WHILE TOASTING**	**TERMINALS #3 & #2- VOLTS MEASURED WHILE DOORS OPENING**	**TERMINALS #4 & #2 VOLTS MEASURED WHILE TOASTING**
A.C. VOLTS	**A.C. VOLTS** (t 10%)	A.C. VOLTS	A.C. VOLTS	A.C. VOLTS
95	52	50	8-9	8-9
100	54	53	8-9	8-9
105	57	55	8-9	8-9
110	59	57	8-9	8-9
115	62	60	8-9	8-9
120	65	62	8-9	8•.9
125	69	65	8-9	8-9
190	98	95	8-9	8-9
200	103	100	8-9	8-9
210	108	105	8-9	8-9
220	113	110	8-9	8-9
230	119	115	8-9	8-9
240	124	120	8-9	8-9
250	125	124	8-9	8-9

LEGEND - TIMER TERMINALS

TERMINALS #1 & #2 - INPUT VOLTAGE TO TIMER
TERMINALS #5 & #1 -- RELAY COIL (INPUT)
TERMINALS #6 & #1 - SOLENOID
TERMINALS #3 & #2 - RESET BUTTON
TERMINALS #4 & #2 - **PUSH TO TOAST BUTTON**



TYPICAL TOASTING TIMES

Minimum setting (Light) 40-50 seconds.
Maximum setting (Dark) 2 min., 10-40 seconds.

INSTALLATION

Install the PD-4 in the most convenient location for ease of cleaning, maintenance, and general operation. Avoid installing in locations with drafts, close proximity to grease or vapor-producing appliances, or other high ambient heat equipment. Recommended height from floor to bottom of toaster is 43". Shelf or counter top should be able to support the toaster weight of 24 lbs. Overhead clearance from top of toaster should allow for easy loading and heat dissipation. 10" minimum clearance is recommended.

WARNING
This toaster must be plugged into the proper voltage which is specified on the data plate located on the back panel of the toaster. Use of any other voltage or altering of plug will damage unit, void the warranty, and may cause injury.

ELECTRICAL SPECIFICATIONS

Voltage (Volts AC)	**Amperage** (Amps)	**Max. Power** (KW)	**Frequency** (HZ)	**Phase**	**Cord** (Attached)	**Plug** (Attached)
120	16	1.9	50/60	1	3'	NEMA 5-20P
208	13	2.6	50/60	1	3'	NEMA 6-15P
240	11	2.6	50/60	1	3'	NEMA 6-15P
*220	10	2.2	50	1	3'	NONE
*240	11	2.6	50	1	3'	NONE

The circuit on which the receptacle is installed must be of adequate wiring size and sufficient capacity to meet the requirements indicated on the unit data plate and in accordance with the National Electrical Code and local electrical installation codes.

I. The 220V electrical information in the shaded area pertains to European models. The 240V electrical information in the shaded area pertains to United Kingdom models.

208 Volt and 240 Volt Models:
The PD-4 is equipped for electrical installation using a receptacle located in the back of the toaster. A specially designed detachable cordset fits the receptacle and comes with the proper plug for the voltage requirements of the toaster. If you prefer, the PD-4 may be connected directly to your electrical service by an authorized service agency or qualified electrician.

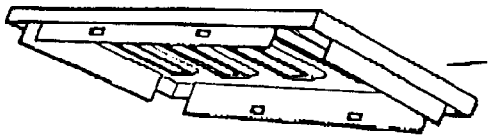
Specifications
(Standard Models)

	VOLTAGE/AMPS				*NET WT.**	*SHIP WT.**	*SHIP VOL.**
PRODUCT #	*120V*	*208V*	*240V*	*KW*	*lbs/kg*	*lbs/kg*	*cu ft/cu m*
751001	*16*	*–*	*–*	*1.9*	*22/10*	*28/13*	*1.2/0.03*
751003	*–*	*13*	*–*	*2.6*	*22/10*	*28/13*	*1.2/0.03*
751002	*–*	*–*	*11*	*2.6*	*22/10*	*28/13*	*1.2/0.03*

**Measurements are approximate.*

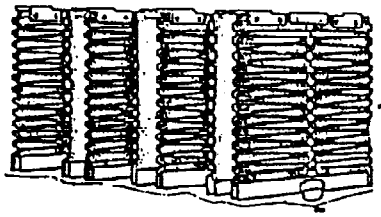
120V	*208V/240V*
NEMA 5-20P	***NEMA 6-15P***

3-foot cord and plug configuration



Top
Part #51116

Important:
Starting with S/N WPD0013330 all 120V models will be equipped with a 20 amp plug. The following parts should be used on these models only:
HEATER CARD
120V- # 51128
TIMER W/POTENTIOMETER
120V- # 51306
CORDSET, NEMA 5-20P
120V- # 41143
All other parts are as listed in this manual.



*HEATER CARD
120V (235W) Part # 51128
208V (104V, 235W) Part # 51099
240V (120V, 235W) Part # 51098

CHASSIS ASSEMBLY w/o HEATER CARDS
Part # 51149

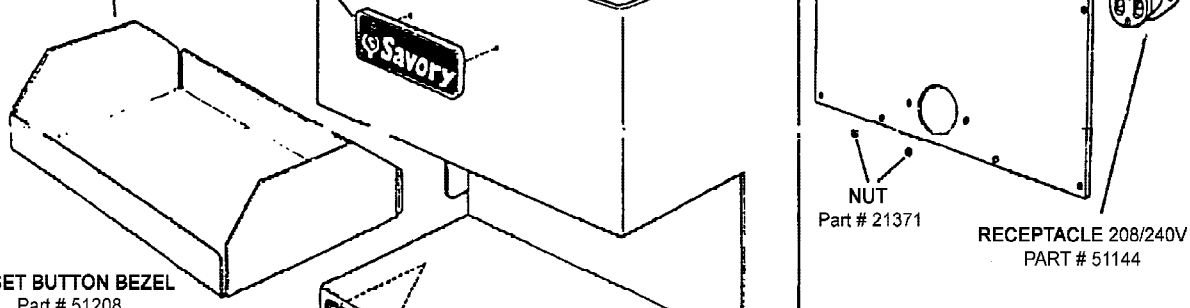
BACK 208/240V
Part # 51100

SCREW
Part # 51125

ALL CASE SCREWS
Part # 51246

RECEIVING TRAY
Part # 51243

LOGO
Part #22184



NUT
Part # 21371

RECEPTACLE 208/240V
PART # 51144

RESET BUTTON BEZEL
Part # 51208

TIMER KNOB
Part # 51280

"TOASTING" INDICATOR LIGHT
Part # 51052 120V
Part # 51070 208/240V

"PUSH TO TOAST" BEZEL
Part # 51201

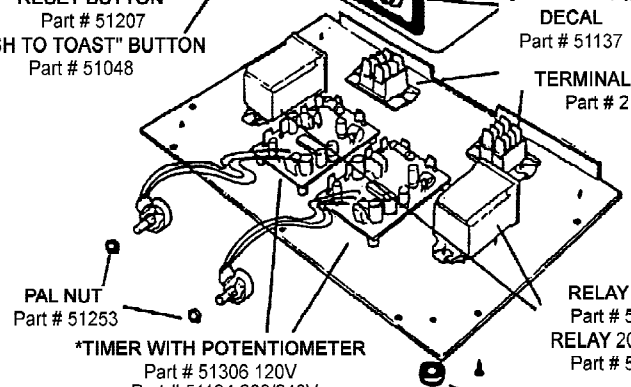
RESET BUTTON
Part # 51207

"PUSH TO TOAST" BUTTON
Part # 51048

WRAP
Part # 51117

DECAL
Part # 51137

TERMINAL BLOCK
Part # 21858



PAL NUT
Part # 51253

*TIMER WITH POTENTIOMETER
Part # 51306 120V
Part # 51134 208/240V

RELAY 120V
Part # 51140
RELAY 208/240V
Part # 51142

SCREW
Part # 21650

RUBBER FOOT
Part # 51071

NOT ILLUSTRATED:
BACK 120V
Part # 51213
S.S. POP RIVETS
Part # 51209
TIMER MOUNT SCREWS
Part # 000589

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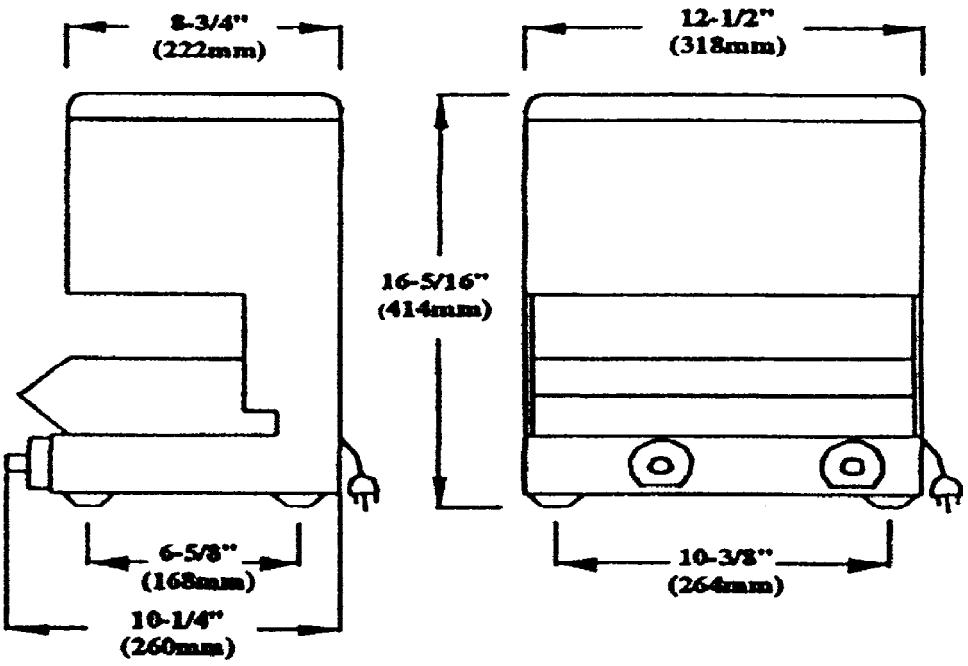

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